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LETTER AND U S NAVY RESPONSE TO REGULATOR COMMENTS REGARDING DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM CODDINGTON COVE RUBBLE FILL AREA
NS NEWPORT RI
8/5/2013
RESOLUTION CONSULTANTS

Resolution Consultants
A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue
Norfolk, Virginia 23510

August 5, 2013

U.S. Environmental Protection Agency, Region 1
Federal Facilities Superfund Section
Attn: Ms. Ginny Lombardo
5 Post Office Square, Suite 100
Mail Code: OSRR07-3
Boston, MA 02109-3912

Rhode Island, Department of Environmental Management
Office of Waste Management
Attn: Ms. Pamela Crump
235 Promenade Street
Providence, RI 02908-5767

RE: Responses to Comments
Draft Sampling and Analysis Plan (SAP) Addendum
Coddington Cove Rubble Fill Area (CCRF), Naval Station (NAVSTA) Newport, Rhode Island

Dear Ms. Lombardo and Ms. Crump:

On behalf of the Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic (MIDLANT), Resolution Consultants appreciates the comments received from the agencies on the Draft Sampling and Analysis Plan (SAP) Addendum for the Coddington Cove Rubble Fill Area (CCRF), Naval Station (NAVSTA) Newport, Rhode Island (Site 4). Enclosed are the Navy's responses to those comments, with two images that provide additional information suggested by the agencies to support the SAP. These images will be incorporated into the Draft Final SAP as figures to better define the basis of investigation. The Navy Remedial Project Manager (RPM) for this site is listed below:

Naval Facilities Engineering Command, Mid-Atlantic
Attn: Ms. Maritza Montegross, Code OPTE3
9742 Maryland Avenue
Norfolk, VA 23511-3095
maritza.montegross@navy.mil
757.341.2013

Resolution Consultants contacts for this project are Melissa Cannon (978.400.1213) and Mark Kauffman (978.905.2262). Please direct formal correspondence to Maritza Montegross, and contact any of us with questions or clarifications as we produce the Draft Final SAP for your final review.

RESOLUTION CONSULTANTS

We appreciate the agencies input into this project and would like to mobilize for the field investigation this fall (2013).

Sincerely,

Resolution Consultants
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Monique Nixon, Navy (letter)
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Lisa McIntosh (letter)
Ken Munney, USFWS (letter)
Ken Finkelstein, NOAA (letter)

NAVY RESPONSES TO
U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
COMMENTS DATED JUNE 13, 2013
ON THE DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM,
CODDINGTON COVE RUBBLE FILL (CCRF) AREA (IR SITE 4)
NAVAL STATION (NAVSTA), NEWPORT, RHODE ISLAND

Navy responses to U. S. Environmental Protection Agency (EPA) comments on the Navy's Draft SAP Addendum for the Coddington Cove Rubble Fill (CCRF) Area (IR Site 4) are presented below. The EPA comments are presented first (in italics) followed by Navy's responses.

General Comments

General Comment 1*: The SAP Addendum should provide a summary of the data from the Revised Draft SASE on the levels of metals in groundwater for the 5 metals identified as posing potential risks. The summary should document the maximum, minimum and average concentrations; the project action limit (PAL) and the basis for the PAL; a summary of the risk conclusions for the metals of concern; and, a comparison to likely cleanup goals including MCLs. A figure should also be provided showing the concentrations of the elevated metals at the existing wells, including an explanation of whether certain wells or areas of the site generally represented the most elevated groundwater conditions. The geochemical data collected during the SASE should also be summarized and discussed in relation to the elevated metals of concern.*

Response: Agreed. A discussion of prior results for As, Cr, Co, Fe, and Mn detected in groundwater will be added to Worksheet #10 Conceptual Site Model. A representative site cross-section has also been created to present this information, which will be incorporated into the SAP Addendum. Refer to the attached images.

Specific Comments

Specific Comment 1: Worksheet 11-2, Step 5 – Analytical Approach*: With respect to Cr, is this constituent expected to be elevated due to groundwater reducing conditions? Or, is the objective of this effort with respect to Cr to collect both total Cr and Cr+6 data so that Navy can evaluate whether the Cr data demonstrate that the Cr at the Site is or is not present as Cr+6? In the Revised Draft SASE, Navy appropriately made the conservative assumption that the Cr measured was present as Cr+6. However, if the Cr is primarily in the form of Cr+3, the levels likely do not exceed applicable risk screening criteria. As such, an "if…then…" statement should be included here to address the purpose of the investigation related to Cr. It would be useful to note whether Cr would have exceeded the risk screening criteria if the maximum Cr level measured during the SASE were Cr+3.*

Response: Agreed. The Navy does not expect Cr+6 to be present in site groundwater. The SAP Addendum will include analysis of both total chromium and Cr+6 to verify the speciation of chromium (i.e., Cr+3 vs. Cr+6) as part of the forthcoming effort. Revisions to the SASE risk assessment and/or conclusions will depend on the speciation of chromium detected.

Specific Comment 2: Worksheet 11-2, Step 5 – Analytical Approach*: The 2 bullets outlined in this section are targeted at evaluating whether the elevated metals in groundwater are due to naturally-occurring reducing conditions. However, providing data to address these 2 objectives alone may not fully address whether the elevated metals are solely a result of reducing conditions naturally caused by wetland subsurface geochemistry or as a result of reducing conditions driven by the biodegradation of petroleum or other substances released at the site. EPA recommends additional lines of evidence be incorporated into this section and the SAP to more fully address this issue. Navy's September 17, 2012 letter provided responses to EPA's comments on the Revised Draft SASE. Response to General Comment 1 stated: "it is possible that the presence of low concentrations of TPH measured in soil is further promoting elevated metals concentrations in groundwater." Therefore, the primary goal of this effort should be to examine the SASE groundwater data and soil data, along with the proposed additional groundwater data, in an attempt to establish whether the elevated metals resulting from the reducing conditions is driven by natural wetland conditions or degradation of petroleum constituents. There is not a 'signature' to the reducing conditions that will enable Navy to prove one driver over the other; therefore, it will need to be a weight of evidence approach. Lines of evidence to consider include:*

a. *Examination of groundwater data in relation to evidence of petroleum releases: If elevated levels of metals, coincident with groundwater reducing conditions, are present across the site, both where there was evidence of TPH and where TPH was not detected, then the reducing conditions may be driven by the natural wetland conditions. A figure depicting TPH levels in soils, along with concentrations of metals in groundwater and key groundwater geochemistry levels (e.g., DO, ORP), would be useful to support this discussion.*
b. *Metals concentrations and geochemistry of unimpacted upgradient groundwater: If elevated levels of metals, coincident with groundwater reducing conditions, are present upgradient of the site, where there are no Navy releases, then the reducing conditions may be driven by the natural wetland conditions. As such, the goal of the upgradient well should be to sample upgradient groundwater that would represent natural wetland conditions, not impacted by potential Navy releases and this needs to be supported in the SAP. Is the proposed location in a wetland environment or former wetland environment? Navy's September 17, 2012 letter states "(h)istoric photographs document a wetland that occupied the majority of the site. In addition, it is likely that before the construction of the railroad, the area was likely a much larger coastal wetland extending to Coddington Cove." Do historic photographs, maps or data support that the location proposed for the upgradient well is located in a wetland environment? Can the Navy support that the location in not impacted by Navy releases?*
c. *Additional lines of evidence to consider may be groundwater samples from an uncontaminated 'reference' wetland area, if one could be identified, and literature searches that may support that the levels of metals observed are consistent with levels observed in comparable wetland environments.*

Finally, pursuant to Navy's September 17, 2012 letter, response to General Comment 2, another objective of the SASE Addendum effort is to provide data to evaluate whether MNA is a feasible remedial alternative to address the elevated metals in groundwater should the Navy need to proceed to an FS to address the elevated metals in groundwater. This additional goal should be incorporated into the SAP Addendum.

Response: Agreed. As suggested, multiple lines of evidence will be applied to (1) select locations and depths for upgradient groundwater samples, and (2) evaluate prior and forthcoming results to support the SASE.

Refining Upgradient Well Locations and Depths

The Navy has reviewed available materials and is proposing two upgradient groundwater monitoring well locations and depths based on the following criteria:

- Upgradient of local groundwater flow
- Absence of subsurface rubble (cross-section B-B' south of MW-5)
- Possible presence of historic wetland
- Eliminate uncertainty associated with offsite sampling (access; other sources)

The Navy proposes to assess the soil borings for the presence of anthropomorphic fill material that is characteristic of the CCRF fill (brick, concrete, asphalt). If these materials are absent, then the location will be considered outside of the rubble fill area. If present but less than 2 feet in thickness, then the location will be considered acceptable to assess subsurface upgradient groundwater conditions. Each well will be installed with a 10-foot screen interval in the sand and gravel unit, consistent with the majority of the existing wells.

Evaluation of Results

Prior analytical results of TPH, selected metals, and selected field parameters have been plotted on a site cross-section. Refer to the attached images. In addition, historic aerial photos are being obtained to help refine the estimated extent of rubble disposal and possible historic wetlands within the site. The aerial photos, geologic logs, and prior analytical results and field parameters will be used to help refine the CSM relative the presence, possible sources, behavior of target metals in the subsurface, and eventually complete the SASE process of site evaluation. If actionable risks are present at the completion of the SASE, site information can then be used to assess further actions via an FFS (e.g., MNA, etc.).

Specific Comment 3: Worksheet 11-4, Groundwater Sampling and Worksheet 18-1*: SAP Worksheet 11 indicates the newly installed monitoring well will be screened "across the water table". SAP Worksheet 18 indicates the screen depth as "mid-water column". Please clarify. The Draft SAP should provide information on the screen depths for all of the existing wells and demonstrate that the proposed screen depth for the new well is consistent with those and support that the new well will be representative of groundwater upgradient of the aquifer depth measured by the existing monitoring well network.*

Response: Worksheets 11 and 18 will indicate that newly installed monitoring wells will be screened across the sand and gravel unit, consistent with the majority of the existing wells (refer to prior comment response). A detailed well construction table, with the existing and two newly proposed monitoring wells, will be added into the SAP.

Specific Comment 4: Worksheet 14-1, Drilling and Monitoring Well Installation*: The Draft SAP indicates that, "during advancement of the soil boring, soil samples will be continuously collected…for visual description of soil composition…" See Specific Comment 2.b. This data may provide support for whether the well location is in a former wetland area.*

Response: Agreed.

Specific Comment 5: Worksheet 14-4, Report Preparation: *In the Tech Memo to be prepared to analyze the data from this supplemental investigation and sampling effort, ensure that a table is provided that depicts both the existing SASE groundwater data for the 5 metals of concern along with the new data and applicable risk screening criteria, so that all available data can be considered in the evaluation. If the new groundwater data suggest revisions to the risk screening results for the metals of concern are warranted, the Tech Memo should include new risk summary tables for these constituents or a discussion of the changes to the risk conclusions presented in the Revised Draft SASE.*

Response: The Tech Memo will tabulate and present prior analytical results and new analytical results from the forthcoming field program, and will provide a geochemical analysis of site conditions relative to the presence, possible sources, and behavior of metals. The revised SASE will incorporate relevant changes (if any) to prior evaluations and conclusions.

NAVY RESPONSES TO
RHODE ISLAND DEPARTMENT OF ENVIRONEMNTAL MANAGEMENT (RIDEM)
COMMENTS DATED JUNE 27, 2013
ON THE DRAFT SAMPLING AND ANALYSIS PLAN ADDENDUM,
CODDINGTON COVE RUBBLE FILL (CCRF) AREA (IR SITE 4)
NAVAL STATION (NAVSTA), NEWPORT, RHODE ISLAND

Navy responses to Rhode Island Department of Environmental Management (RIDEM) comments on the Navy's Draft SAP Addendum for the Coddington Cove Rubble Fill (CCRF) Area (IR Site 4) are presented below. The RIDEM comments are presented first (in italics) followed by Navy's responses.

General Comments

General Comment 1*: Please include in this SAP Addendum a discussion of the previous groundwater data for arsenic, chromium, cobalt, iron and manganese, and include a summary of this data on a figure.*

Response: Agreed. A discussion of prior results for As, Cr, Co, Fe, and Mn detected in groundwater will be added to Worksheet #10 Conceptual Site Model. A representative site cross-section has also been created to present this information, which will be incorporated into the SAP Addendum. Refer to the attached images.

Specific Comments

Specific Comment 1: SAP Worksheet #11, Step 5 – Analytical Approach; 1st bullet:

"If the concentrations of the five metals of primary interest (As, Cr, Co, Fe, and Mn) in site groundwater are shown to be consistent with upgradient groundwater, then these metals may be considered to be consistent with local background conditions"

The Navy is only proposing to install one upgradient well, to be located adjacent to the site on the other side of Coddington Highway. In order to state with reasonable certainty that concentrations on the site are consistent with local background conditions, several upgradient monitoring wells should be installed to provide a better representation of upgradient groundwater concentrations. Please revise this SAP to include one or two additional upgradient monitoring wells. Please review historic aerial photos, figures, etc. to ensure that the locations of the upgradient wells have not been impacted by potential former Navy releases.

Response: As suggested, the Navy has reviewed available materials and is proposing two upgradient groundwater monitoring well locations and depths. The siting of new wells is based on the following criteria:

- Upgradient of local groundwater flow
- Absence of subsurface rubble (cross-section B-B' south of MW-5)
- Possible presence of historic wetland
- Eliminate uncertainty associated with offsite sampling (access; other sources)

The Navy proposes to assess the soil borings for the presence of anthropomorphic fill material that is characteristic of the CCRF fill (brick, concrete, asphalt). If these materials are absent, then the location will be considered outside of the rubble fill area. If present but less than 2 feet in thickness, then the location will be considered acceptable to assess subsurface upgradient groundwater conditions. Each well will be installed with a 10-foot screen interval in the sand and gravel unit, consistent with the majority of the existing wells.

Specific Comment 2: SAP Worksheet #15, Table 15-1, Project Action Limits (PALs) - Groundwater*: Please update the sources for the project action limits (PALs) and include PALs for nitrate and nitrite. Specifically, the USEPA Regional Screening Levels (RSLs) were updated in November 2012. Also, please clarify in the footnotes that the RSLs for cobalt, iron, and manganese are adjusted to represent a hazard quotient of 0.1.*

There are Federal Maximum Contaminant Levels (MCLs) available for nitrate (10 mg/L) and nitrate (1 mg/L). Please include these as PALs.

Response: Agreed. The revision will be applied to the SAP.

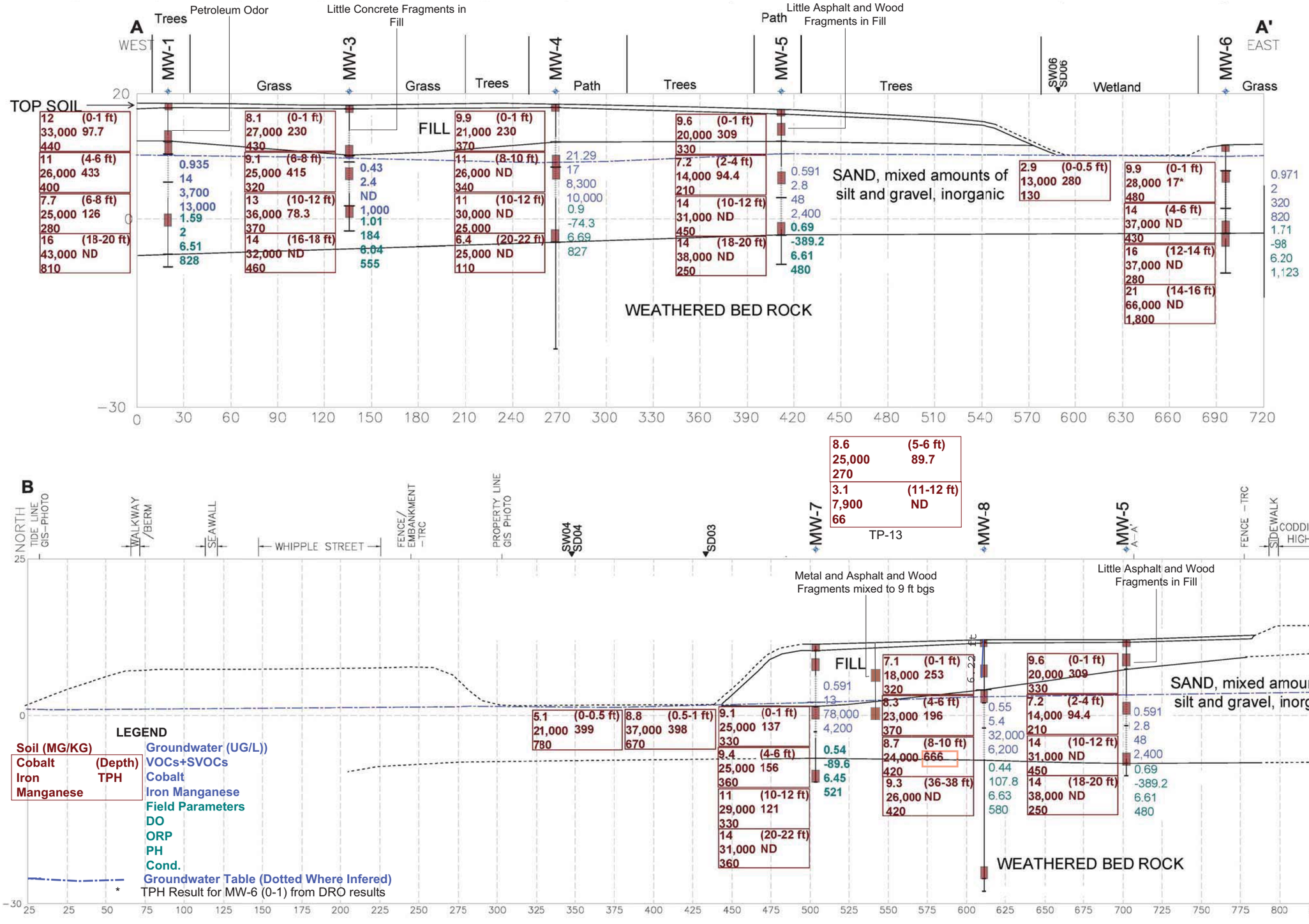
Legend

MW09 Proposed Well

A — A' Cross-Section Location

DRAFT

Image 1



DRAFT Image 2